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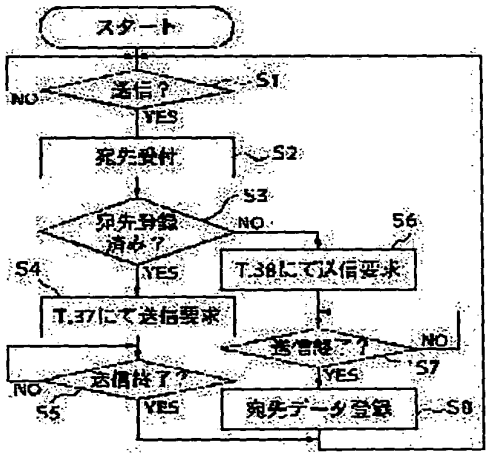
(54) FACSIMILE EQUIPMENT, FACSIMILE TRANSMISSION METHOD AND STORAGE MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To make maximum use of the receiving capacity of the facsimile equipment of an opposite party in the facsimile equipment based on ITU recommendation T.37 capable of transmitting data regardless of the state of the facsimile equipment of the opposite party.

SOLUTION: The receiving capacity of a receiving side facsimile equipment is stored (S8), and when the facsimile equipment of the opposite party is designated from a user (S1, S2), whether the receiving capacity of the facsimile equipment of the opposite party is stored or not is discriminated (S3). When the receiving capacity of the facsimile equipment of the opposite party is stored as the result of the discrimination, transmission by an electronic mail communication system based on the ITU recommendation T.37 is requested to a gateway (S4) and transmission corresponding to the stored receiving capacity of the facsimile equipment of the opposite party is performed. When it is discriminated that the equipment is not stored, transmission by a real time facsimile communication system based on the ITU recommendation T.37 is requested to the gateway (S6).



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* NOTICES *

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CLAIMS

[Claim(s)]
[Claim 1] Facsimile apparatus which is characterized by providing the following and which performs facsimile communication by the Internet through Gateway. A storage means to memorize the receiving capacity of receiving-side facsimile apparatus. A distinction means to distinguish whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means when partner point facsimile apparatus is specified from a user. The 1st Request-to-Send means which will perform the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction means and it will be distinguished. The 2nd Request-to-Send means which will perform the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means by the aforementioned distinction means and it will be distinguished.
[Claim 2] The Request-to-Send means of the above 1st is facsimile apparatus according to claim 1 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 3] The property about the aforementioned transmitting image data is resolution, paper size, and facsimile apparatus according to claim 2 characterized by being at least one of the coding methods.
[Claim 4] The facsimile communication mode of the above 1st is facsimile apparatus according to claim 1 to 3 characterized by being the communication mode which can transmit an E-mail.
[Claim 5] The facsimile communication mode of the above 1st is facsimile apparatus according to claim 4 characterized by being a communication mode by the ITU advice T.37.
[Claim 6] The Request-to-Send means of the above 2nd is facsimile apparatus according to claim 1 to 5 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 7] The receiving capacity of the aforementioned transmitting partner point facsimile apparatus memorized by the aforementioned storage means by the Request-to-Send means of the above 2nd is the degree of maximal-solution image, the maximum paper size, and facsimile apparatus according to claim 6 characterized by being at least one of the coding methods.
[Claim 8] The facsimile communication mode of the above 2nd is facsimile apparatus according to claim 1 to 7 characterized by being the communication mode which communicates on real time.
[Claim 9] The facsimile communication mode of the above 2nd is facsimile apparatus according to claim 8 characterized by being a communication mode by the ITU advice T.38.
[Claim 10] Facsimile apparatus which has the Internet connectivity function characterized by providing the following. A storage means to memorize the receiving capacity of receiving-side facsimile apparatus. A distinction means to distinguish whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means when partner point facsimile apparatus is specified from a user. The 1st transmitting means which will perform transmission by the 1st facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction means and it will be distinguished. The 2nd transmitting means which will perform transmission by the 2nd facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not

memorized by the aforementioned storage means by the aforementioned distinction means and it will be distinguished.
[Claim 11] The transmitting means of the above 1st is facsimile apparatus according to claim 10 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 12] The property about the aforementioned transmitting image data is resolution, paper size, and facsimile apparatus according to claim 11 characterized by being at least one of the coding methods.
[Claim 13] The facsimile communication mode of the above 1st is facsimile apparatus given in either of claim 10 ******** 12 characterized by being the communication mode which can transmit an E-mail.
[Claim 14] The facsimile communication mode of the above 1st is facsimile apparatus according to claim 13 characterized by being a communication mode by the ITU advice T.37.
[Claim 15] The Request-to-Send means of the above 2nd is facsimile apparatus according to claim 10 to 14 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 16] The receiving capacity of the aforementioned transmitting partner point facsimile apparatus memorized by the aforementioned storage means by the Request-to-Send means of the above 2nd is facsimile apparatus according to claim 15 characterized by being at least one of resolution and the paper sizes.
[Claim 17] The facsimile communication mode of the above 2nd is facsimile apparatus according to claim 10 to 16 characterized by being the communication mode which communicates on real time.
[Claim 18] The facsimile communication mode of the above 2nd is facsimile apparatus according to claim 17 characterized by being a communication mode by the ITU advice T.38.
[Claim 19] The facsimile transmitting method applied to the facsimile apparatus which is equipped with a storage means characterized by providing the following to memorize the receiving capacity of receiving-side facsimile apparatus, and performs facsimile communication by the Internet through Gateway. The distinction step from which the receiving capacity of this partner point facsimile apparatus distinguishes whether the aforementioned storage means memorizes when partner point facsimile apparatus is specified from a user. The 1st Request-to-Send step which will perform the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished. The 2nd Request-to-Send step which will perform the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished.
[Claim 20] The Request-to-Send step of the above 1st is the facsimile transmitting method according to claim 19 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 21] The facsimile communication mode of the above 1st is the facsimile transmitting method according to claim 19 or 20 characterized by being a communication mode by the ITU advice T.37.
[Claim 22] The Request-to-Send step of the above 2nd is the facsimile transmitting method according to claim 19 to 21 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 23] The facsimile communication mode of the above 2nd is the facsimile transmitting method according to claim 19 to 22 characterized by being a communication mode by the ITU advice T.38.
[Claim 24] The facsimile transmitting method applied to the facsimile apparatus which is equipped with a storage means characterized by providing the following to memorize the receiving capacity of receiving-side facsimile apparatus, and has an Internet connectivity function. The distinction step which distinguishes whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means when partner point facsimile apparatus is specified from a user. The 1st transmitting step which will perform transmission by the 1st facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished. The 2nd transmitting step which will perform transmission by the 2nd facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification

was carried out [aforementioned] is not memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished.
[Claim 25] The transmitting step of the above 1st is the facsimile transmitting method according to claim 24 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 26] The facsimile communication mode of the above 1st is the facsimile transmitting method according to claim 24 or 25 characterized by being a communication mode by the ITU advice T.37.
[Claim 27] The Request-to-Send step of the above 2nd is the facsimile transmitting method according to claim 24 to 26 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 28] The facsimile communication mode of the above 2nd is the facsimile transmitting method according to claim 24 to 27 characterized by being a communication mode by the ITU advice T.38.
[Claim 29] The storage which was equipped with a storage means characterized by providing the following to memorize the receiving capacity of receiving-side facsimile apparatus, and memorized as a program the facsimile transmitting method applied to the facsimile apparatus which performs facsimile communication by the Internet through Gateway and in which read-out [computer] is possible. The distinction step from which the receiving capacity of this partner point facsimile apparatus distinguishes whether the aforementioned storage means memorizes when the aforementioned facsimile transmitting method has partner point facsimile apparatus specified from a user. The 1st Request-to-Send step which will perform the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished. The 2nd Request-to-Send step which will perform the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished.
[Claim 30] The Request-to-Send step of the above 1st is a storage according to claim 29 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 31] The facsimile communication mode of the above 1st is a storage according to claim 29 or 30 characterized by being a communication mode by the ITU advice T.37.
[Claim 32] The Request-to-Send step of the above 2nd is a storage according to claim 29 to 31 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 33] The facsimile communication mode of the above 2nd is a storage according to claim 29 to 32 characterized by being a communication mode by the ITU advice T.38.
[Claim 34] The storage which was equipped with a storage means characterized by providing the following to memorize the receiving capacity of receiving-side facsimile apparatus, and memorized as a program the facsimile transmitting method applied to the facsimile apparatus which has an Internet connectivity function and in which read-out [computer] is possible. The distinction step which distinguishes whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means when the aforementioned facsimile transmitting method has partner point facsimile apparatus specified from a user. The 1st transmitting step which will perform transmission by the 1st facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished. The 2nd transmitting step which will perform transmission by the 2nd facsimile communication mode if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means by the aforementioned distinction step and it will be distinguished.
[Claim 35] The transmitting step of the above 1st is a storage according to claim 34 characterized by reading the receiving capacity of the partner point facsimile apparatus which is memorized by the aforementioned storage means, and by which specification was carried out [aforementioned], and determining the property about transmitting image data within the limits of the receiving capacity by which reading appearance was carried out [aforementioned].
[Claim 36] The facsimile communication mode of the above 1st is a storage according to claim 34 or 35 characterized

by being a communication mode by the ITU advice T.37.
[Claim 37] The Request-to-Send step of the above 2nd is a storage according to claim 34 to 36 characterized by making the aforementioned storage means memorize the receiving capacity of transmitting partner point facsimile apparatus after ending transmission by the facsimile communication mode of the above 2nd.
[Claim 38] The facsimile communication mode of the above 2nd is a storage according to claim 34 to 37 characterized by being a communication mode by the ITU advice T.38.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the storage which memorized the program which performs the facsimile transmitting methods applied to the facsimile apparatus which have the facsimile apparatus or the Internet connectivity function to perform facsimile communication by the Internet through Gateway especially, and these facsimile apparatus, respectively, and these facsimile transmitting methods, respectively about facsimile apparatus, the facsimile transmitting method, and a storage.
[0002]
[Description of the Prior Art] In recent years, the spread using the Internet of data communication is remarkable.
[0003] The ITU advice H.323 for carrying out communication of a video data or voice data to real time using the Internet and the ITU advice T.38 for performing facsimile communication on real time are proposed. Moreover, the ITU advice T.37 which changes facsimile data into a TIFF file and transmits in E-mail is also proposed. With the equipment using these, communication is realizable through the Internet with cheap cost. In order that a transmit terminal may exchange immediate data in the ITU advice T.38 between the terminals which finally receive data, the point as for which the confirmation of receipt of data is made to real time is convenient.
[0004] Drawing 6 is drawing showing an example of the composition of the conventional communication system based on the ITU advice T.38 which carries out facsimile communication to real time using the Internet.
[0005] In 101 in drawing, receiving facsimile apparatus and 104 show transmitting Gateway (GW), and, as for the Internet and 102, 105 shows receiving Gateway (GW), as for transmitting facsimile apparatus and 103. It connects with the Internet 101 and transmission GW104 and reception GW105 perform data communication through the Internet 101. Moreover, the transmitting facsimile apparatus 102 and the receiving facsimile apparatus 103 are G3 facsimile apparatus currently generally used, and it usually connects with the analog public network (PSTN) 106,107, respectively, and they perform G3 facsimile transmission or reception of image information etc. The receiving facsimile apparatus 103 is connected through PSTN106,107 at reception GW105, respectively, and the transmitting facsimile apparatus 102 can perform the real-time Internet facsimile communication of image information etc. to transmission GW104 from the transmitting facsimile apparatus 102 to the receiving facsimile apparatus 103 through transmission GW104, the Internet 101, and reception GW105 here.
[0006] Drawing 7 is drawing showing the communication sequence at the time of transmitting image information etc. to the receiving facsimile apparatus 103 from the transmitting facsimile apparatus 102 in the conventional communication system shown in drawing 6 .
[0007] First, it off-hook-reaches, and the transmitting facsimile apparatus 102 linked to PSTN106 carries out dial operation, and calls transmission GW104. Transmission GW104 detects the call, and answers it, and off-hook, then transmission GW104 and the transmitting facsimile apparatus 102 of an analog terminal are connected through PSTN106 (110).
[0008] Using the information on the facsimile transmission place sent from the transmitting facsimile apparatus 102, transmission GW104 specifies the reception GW105 which leads to the point of the Internet 101, and transmits the data packet which consists of a call setup signal through the Internet 101 to the reception GW105 which specified (111). Suppose that the information which specifies the receiving facsimile apparatus 103 which is a facsimile transmission place is included in the call setup signal here. If a call setup signal packet is received, reception GW105 will specify the receiving facsimile apparatus 103, and will connect with the receiving facsimile apparatus 103 (112). Reception GW105 detects this connection and transmits the data packet which consists of a call connection signal to transmission GW104 through the Internet 101 (113). Transmission GW104 and reception GW105 connect a FAX channel through the Internet 101 by these sequences (114), operation of T.38 session specified to the ITU advice T.38 is attained in the

transmitting facsimile apparatus 102, transmission GW104, reception GW105, and the receiving facsimile apparatus 103 (115), and image information etc. can be transmitted to the receiving facsimile apparatus 103 from the transmitting facsimile apparatus 102.

[0009] Since the transmitting facsimile apparatus 102 performs on-hook operation after ending a facsimile send action, transmission GW104 detects it, cuts connection with the transmitting facsimile apparatus 102 (116), and transmits the data packet which consists of an open completion signal further to reception GW105 through the Internet 101 (117). If reception GW105 receives an open completion signal packet, a receiving facsimile apparatus 103 snake G tone will be sent (118), and the receiving facsimile apparatus 103 will perform on-hook operation in response to it (119).

[0010] Above, the sequence of the real-time Internet facsimile communication is ended.

[0011]

[Problem(s) to be Solved by the Invention] By the way, it may be difficult to take a synchronization between the facsimile apparatus of a transmitting side, and the facsimile apparatus of a receiving side, and to secure a predetermined transmission speed depending on the situation of a data communication network in the conventional communication system based on the ITU advice T.38 which carries out facsimile communication to real time using the Internet. Moreover, when the facsimile apparatus of the partner point is a busy condition, it cannot transmit.

[0012] On the other hand, in the facsimile communication based on the ITU advice T.37, since image data is appended to E-mail and it transmits to it, it can transmit regardless of the state of partner point facsimile apparatus, and when a personal computer is the partner point, it can transmit. However, in the facsimile transmission based on such ITU advice T.37, when the receiving capacity (ready-for-receiving ability resolution, paper size, etc.) of partner point facsimile apparatus is unknown, transmission is performed supposing minimum receiving capacity (a resolution standard, A4 size). Therefore, even if it was the case which can be received by partner point facsimile apparatus by high resolution, the image data of a low resolution will be transmitted comparatively and there was a trouble that the maximum practical use of the receiving capacity of partner point facsimile apparatus could not be carried out.

[0013] It aims at offering the facsimile apparatus which enables this invention to carry out the maximum practical use of the receiving capacity of partner point facsimile apparatus in the facsimile communication based on the ITU advice T.37 which can be made in view of such a trouble, and cannot be based on the state of partner point facsimile apparatus, but can transmit data, the facsimile transmitting method, and a storage.

[0014]

[Means for Solving the Problem] In the facsimile apparatus which performs facsimile communication by the Internet through Gateway according to invention according to claim 1 in order to attain the above-mentioned purpose When partner point facsimile apparatus is specified from a user to be a storage means to memorize the receiving capacity of receiving-side facsimile apparatus, Whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means by distinction means to distinguish, and the aforementioned distinction means If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st Request-to-Send means and aforementioned distinction means which performs the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd Request-to-Send means which performs the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway.

[0015] In the facsimile apparatus which has an Internet connectivity function according to invention according to claim 10 When partner point facsimile apparatus is specified from a user to be a storage means to memorize the receiving capacity of receiving-side facsimile apparatus, Whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means by distinction means to distinguish, and the aforementioned distinction means If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st transmitting means and aforementioned distinction means which performs transmission by the 1st facsimile communication mode If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd transmitting means which performs transmission by the 2nd facsimile communication mode.

[0016] Moreover, according to invention according to claim 19, it has a storage means to memorize the receiving capacity of receiving-side facsimile apparatus. In the facsimile transmitting method applied to the facsimile apparatus which performs facsimile communication by the Internet through Gateway When partner point facsimile apparatus is specified from a user, the receiving capacity of this partner point facsimile apparatus whether the aforementioned

storage means memorizes by the distinction step to distinguish and the aforementioned distinction step If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st Request-to-Send step and aforementioned distinction step which performs the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd Request-to-Send step which performs the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway.

[0017] In the facsimile transmitting method applied to the facsimile apparatus which according to invention according to claim 24 is equipped with a storage means to memorize the receiving capacity of receiving-side facsimile apparatus, and has an Internet connectivity function When partner point facsimile apparatus is specified from a user, whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means by the distinction step to distinguish and the aforementioned distinction step If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st transmitting step and aforementioned distinction step which performs transmission by the 1st facsimile communication mode If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd transmitting step which performs transmission by the 2nd facsimile communication mode.

[0018] Furthermore, according to invention according to claim 29, it has a storage means to memorize the receiving capacity of receiving-side facsimile apparatus. In the storage which memorized as a program the facsimile transmitting method applied to the facsimile apparatus which performs facsimile communication by the Internet through Gateway and in which read-out [computer] is possible When the aforementioned facsimile transmitting method has partner point facsimile apparatus specified from a user, The receiving capacity of this partner point facsimile apparatus whether the aforementioned storage means memorizes by the distinction step to distinguish and the aforementioned distinction step If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st Request-to-Send step and aforementioned distinction step which performs the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd Request-to-Send step which performs the Request to Send by the 2nd facsimile communication mode to the aforementioned Gateway.

[0019] According to invention according to claim 34, it has a storage means to memorize the receiving capacity of receiving-side facsimile apparatus. In the storage which memorized as a program the facsimile transmitting method applied to the facsimile apparatus which has an Internet connectivity function and in which read-out [computer] is possible When the aforementioned facsimile transmitting method has partner point facsimile apparatus specified from a user, Whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means by the distinction step to distinguish and the aforementioned distinction step If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means and it will be distinguished By the 1st transmitting step and aforementioned distinction step which performs transmission by the 1st facsimile communication mode If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished, it will be characterized by having the 2nd transmitting step which performs transmission by the 2nd facsimile communication mode.

[0020]

[Embodiments of the Invention] Hereafter, the form of operation of this invention is explained with reference to a drawing.

[0021] (Form of the 1st operation) Drawing 1 is the block diagram showing the composition of the 1st of the form of operation of the facsimile apparatus concerning this invention. This facsimile apparatus is connected to Gateway (GW) through PSTN, and Gateway (GW) is connected to the Internet.

[0022] In drawing 1 , 10 is the control section which controls the whole facsimile apparatus, and has become the microcomputer circuit constituted by a microprocessor 11, ROM12 and RAM13, DMA controller 14, a timer 15, and clock IC16 grade. In a control section 10, when a microprocessor 11 performs the control program memorized by ROM12, motion control of the whole facsimile apparatus and management of various data are performed.

[0023] 20 is a control unit, is constituted by various keys, the display, etc. and performs registration of a key input of

an operator, and presenting of various information. 30 is the line control section, consists of a circuit interface, a modem, a telephone circuit, etc., and performs transmission and reception of image data and communications control data, arrival-and-departure call control of a telephone, etc. between Gateway through PSTN which is an analog network.

[0024] 40 is a read control section, consists of a CCD reading conversion circuit, a A/D (analog-to-digital) conversion circuit, an image-processing circuit, etc., and performs image processings, such as photo electric translation, A/D conversion, picture amendment, and binary-ized processing, to the data read optically. 50 is a record control section, and when the printing section is a LASER beam printer (LP), it consists of the image-processing section, the LBP interface section, and a LBP engine.

[0025] Next, the facsimile transmitting processing performed in the facsimile apparatus constituted in this way is explained with reference to drawing 2 .

[0026] Drawing 2 is a flow chart which shows the procedure of the facsimile communications processing performed by the control section 10 of facsimile apparatus.

[0027] When there is a Request to Send from the operator of facsimile apparatus (it is Y at S1), the destination (telephone number) is received (S2). And the received destination already judges whether it is the registered destination (S3). That is, facsimile communication by the ITU advice T.38 is performed, the receiving capacity (the degree of maximal-solution image, the maximum paper size, coding method) of two or more facsimile apparatus which are in RAM13 of a control section 10 at a receiving side is memorized for every facsimile apparatus, and the received destination judges whether it is the registered destination of receiving capacity with reference to this storage table so that Step S8 mentioned later may explain.

[0028] As a result of referring to a storage table, it requires that E-mail facsimile transmission based on the ITU advice T.37 should be performed to the Gateway already connected through Y) and PSTN by (S3 when it is the registered destination, and (S4) and transmission are started. The resolution about the image data which transmits at this time, paper size, and a coding method are controlled to become the maximum capacity as much as possible within the limits of the receiving capacity registered to the transmitting destination. If a transmitting end is carried out (it is Y at S5), it will return to Step S1.

[0029] It requires that real-time facsimile transmission based on the ITU advice T.38 should be performed to the Gateway connected through N) and PSTN on the other hand by (S3 when the received destination is not registered (S6), and transmission is started. After transmission is completed (it is Y at S7), the data of the receiving capacity of the transmitting partner point obtained by this transmission are registered into RAM13 of a control section 10, and it returns to Step (S8) S1.

[0030] Drawing 3 is drawing having shown an example of the storage table memorized by RAM13 of a control section 10. The receiving capacity (the degree of maximal-solution image, the maximum paper size, coding method) of the facsimile apparatus of a receiving side is memorized for every telephone number of facsimile apparatus.

[0031] As mentioned above, in the transmitting-side facsimile apparatus which performs facsimile transmission by the Internet through Gateway, in transmitting to the receiving-side facsimile apparatus receiving capacity is remembered to be by transmitting-side facsimile apparatus, to transmitting-side Gateway, the E-mail facsimile transmission based on the ITU advice T.37 is required, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus is carried out, and it performs facsimile transmission. On the other hand, in performing facsimile transmission to the receiving-side facsimile apparatus receiving capacity is not remembered to be by transmitting-side facsimile apparatus, it requires the real-time facsimile transmission based on the ITU advice T.38 from transmitting-side Gateway. And in case the receiving capacity of receiving-side facsimile apparatus is memorized to transmitting-side facsimile apparatus and facsimile transmission is carried out next at this receiving-side facsimile apparatus in that case, it has.

[0032] Thereby, when transmitting-side facsimile apparatus knows the receiving capacity of receiving-side facsimile apparatus, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus can be carried out, and E-mail facsimile transmission based on the ITU advice T.37 which is not based on the state of receiving-side facsimile apparatus, but can perform data transmission can be performed.

[0033] In addition, although resolution, paper size, and the coding method have prescribed receiving capacity with the form of implementation of the above 1st, receiving capacity may be these at least one.

[0034] (Form of the 2nd operation) Drawing 4 is the block diagram showing the composition of the 2nd of the form of operation of the facsimile apparatus concerning this invention. This facsimile apparatus has the Internet connectivity function. In addition, since the 2nd composition of the form of operation is fundamentally the same as the 1st composition of the form of operation, the same reference mark is given to the same component, the explanation is omitted and only a different portion is explained.

[0035] With the form of the 2nd operation, the LAN control section 60 and the image transformation section 70 are newly added.
[0036] It connects with the Internet, and the LAN control section 60 transmits and receives a digital signal as packets, such as TCP/IP, and also controls the ITU advice T.37 and communication of T.38.
[0037] The image transformation section 70 changes image data into the data of a TIFF format, or changes compressed code data, such as MH, MR, MMR, and JBIG, into image data, and changes them into the data of a TIFF format further.
[0038] Next, the facsimile transmitting processing performed in the facsimile apparatus constituted in this way is explained with reference to drawing 5 .
[0039] Drawing 5 is a flow chart which shows the procedure of the facsimile communications processing performed by the control section 10 of the facsimile apparatus in the form of the 2nd operation.
[0040] When there is a Request to Send from the operator of facsimile apparatus (it is Y at S11), the destination (telephone number) is received (S12). And the received destination already judges whether it is the registered destination (S13). That is, facsimile communication by the ITU advice T.38 is performed, the receiving capacity (the degree of maximal-solution image, the maximum paper size) of two or more facsimile apparatus which are in RAM13 of a control section 10 at a receiving side is memorized for every facsimile apparatus, and the received destination judges whether it is the registered destination of receiving capacity with reference to this storage table so that Step S18 mentioned later may explain.
[0041] As a result of referring to a storage table, when it is the registered destination, E-mail facsimile transmission based on Y) and the ITU advice T.37 is already performed by (S13 (S14). The resolution about the image data which transmits at this time, and paper size are controlled to become within the limits of the receiving capacity registered to the transmitting destination. In addition, a coding method is a TIFF format. If a transmitting end is carried out (it is Y at S15), it will return to Step S11.
[0042] On the other hand, when the received destination is not registered, real-time facsimile transmission based on N) and the ITU advice T.38 is performed by (S13 (S16). After transmission is completed (it is Y at S17), the data of the receiving capacity of the transmitting partner point obtained by this transmission are registered into RAM13 of a control section 10, and it returns to Step (S18) S11.
[0043] As mentioned above, in the facsimile apparatus which has an Internet connectivity function, in transmitting to the receiving-side facsimile apparatus receiving capacity is remembered to be by transmitting-side facsimile apparatus, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus is carried out, and it performs E-mail facsimile transmission based on the ITU advice T.37. On the other hand, in performing facsimile transmission to the receiving-side facsimile apparatus receiving capacity is not remembered to be by transmitting-side facsimile apparatus, it performs real-time facsimile transmission based on the ITU advice T.38. And in case the receiving capacity of receiving-side facsimile apparatus is memorized to transmitting-side facsimile apparatus and facsimile transmission is carried out next at this receiving-side facsimile apparatus in that case, it has.
[0044] Thereby, when transmitting-side facsimile apparatus knows the receiving capacity of receiving-side facsimile apparatus, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus can be carried out, and E-mail facsimile transmission based on the ITU advice T.37 which is not based on the state of receiving-side facsimile apparatus, but can perform data transmission can be performed.
[0045] In addition, although resolution and paper size have prescribed receiving capacity with the form of implementation of the above 2nd, receiving capacity may be these at least one.
[0046] In addition, it cannot be overemphasized by supplying the storage which memorized the program code of the software which realizes the function of the form of each operation mentioned above again to a system or equipment, and reading and performing the program code with which the computer (or CPU and MPU) of the system or equipment was stored in the storage that this invention is attained.
[0047] In this case, the program code itself read from the storage will realize the function of the form of each above-mentioned operation, and the storage which memorized the program code will constitute this invention.
[0048] As a storage for supplying a program code, a floppy disk, a hard disk, an optical disk, a magneto-optic disk, CD-ROM, CD-R, a magnetic tape, nonvolatile memory card, ROM, etc. can be used.
[0049] Moreover, when the function of the form of each operation which performed a part or all of processing that OS which is working on a computer is actual, based on directions of the program code, and the function of the form of each operation mentioned above by performing the program code which the computer read is not only realized, but was mentioned above by the processing is realized, being contained in this invention cannot be overemphasized.
[0050] Furthermore, after the program code read from the storage was written in the memory with which the expansion unit connected to the expansion board inserted in the computer or the computer is equipped, When the function of the

form of each operation which performed a part or all of processing that CPU with which the expansion board and expansion unit are equipped is actual, based on directions of the program code, and was mentioned above by the processing is realized, being contained in this invention cannot be overemphasized.

[0051]

[Effect of the Invention] When it has a storage means to memorize the receiving capacity of receiving-side facsimile apparatus in the facsimile apparatus which performs facsimile communication by the Internet through Gateway according to a claim 1 and invention according to claim 19 or 29 as explained in full detail above, and partner point facsimile apparatus is specified from a user, it distinguishes whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means. If the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means as a result of this distinction and it will be distinguished Perform the Request to Send by the 1st facsimile communication mode to the aforementioned Gateway, and on the other hand, if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means and it will be distinguished The Request to Send by the 2nd facsimile communication mode is performed to the aforementioned Gateway.

[0052] Thereby, when transmitting-side facsimile apparatus knows the receiving capacity of receiving-side facsimile apparatus, it is not based on the state of receiving-side facsimile apparatus, but data transmission can be performed, for example, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus can be carried out, and E-mail facsimile transmission based on the ITU advice T.37 can be performed.

[0053] Moreover, according to a claim 10 and invention according to claim 24 or 34 When it has a storage means to memorize the receiving capacity of receiving-side facsimile apparatus, in the facsimile apparatus which has an Internet connectivity function and partner point facsimile apparatus is specified from a user, If it distinguishes, and the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is memorized by the aforementioned storage means as a result of this distinction and it will be distinguished, whether the receiving capacity of this partner point facsimile apparatus is memorized by the aforementioned storage means Transmission by the 1st facsimile communication mode is performed, and if the receiving capacity of the partner point facsimile apparatus by which specification was carried out [aforementioned] is not memorized by the aforementioned storage means on the other hand and it will be distinguished, transmission by the 2nd facsimile communication mode will be performed.

[0054] Thereby, when transmitting-side facsimile apparatus knows the receiving capacity of receiving-side facsimile apparatus, it is not based on the state of receiving-side facsimile apparatus, but data transmission can be performed, for example, the maximum practical use of the receiving capacity of receiving-side facsimile apparatus can be carried out, and E-mail facsimile transmission based on the ITU advice T.37 can be performed.

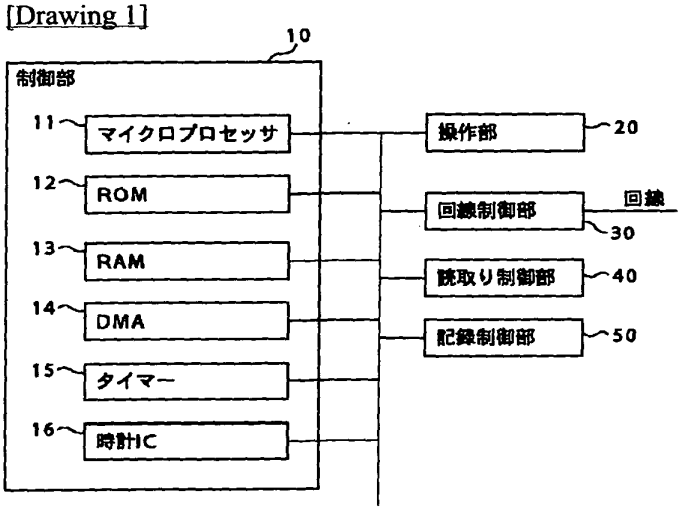
[0055] In the facsimile communication based on the ITU advice T.37 which cannot be based on the state of partner point facsimile apparatus, but can transmit data in this way, it becomes possible to carry out the maximum practical use of the receiving capacity of partner point facsimile apparatus.

[Translation done.]

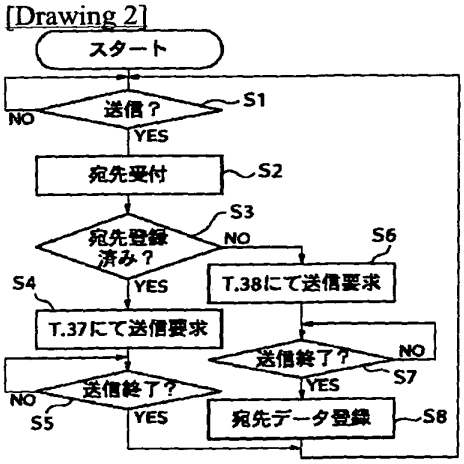
* NOTICES *

DRAWINGS

[Drawing 1]



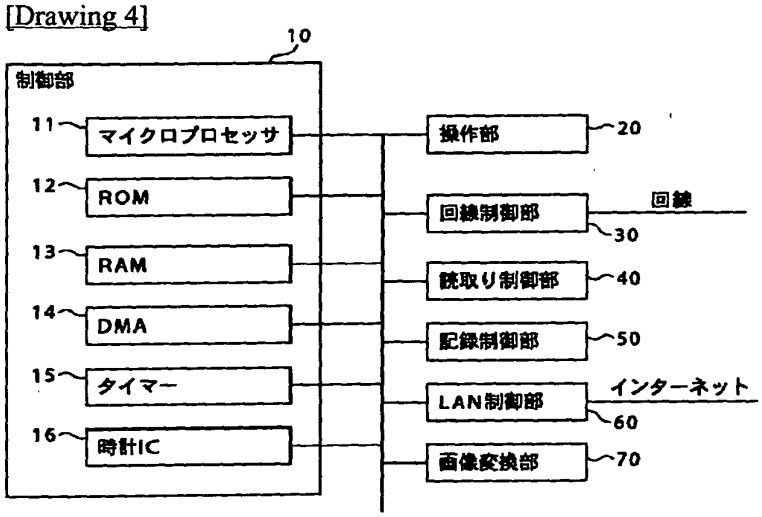
[Drawing 2]



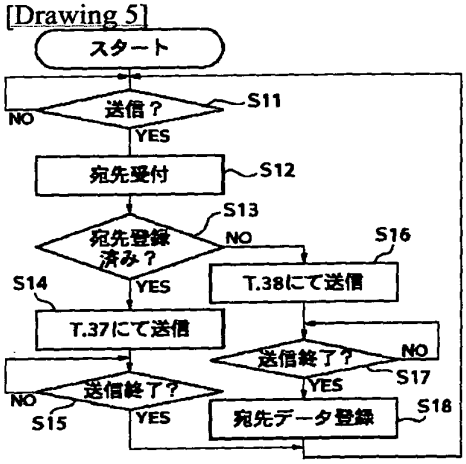
[Drawing 3]

電話番号	最大解像度	最大紙サイズ	符号化方式
XXX 1	8×7.7	A4	MMR/MR/MH
XXX 2	8×15.4	A3	JBIG/MMR/MR/MH
XXX 3	8×3.75	A4	MH

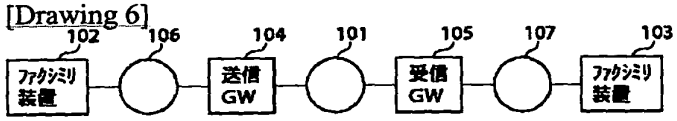
[Drawing 4]



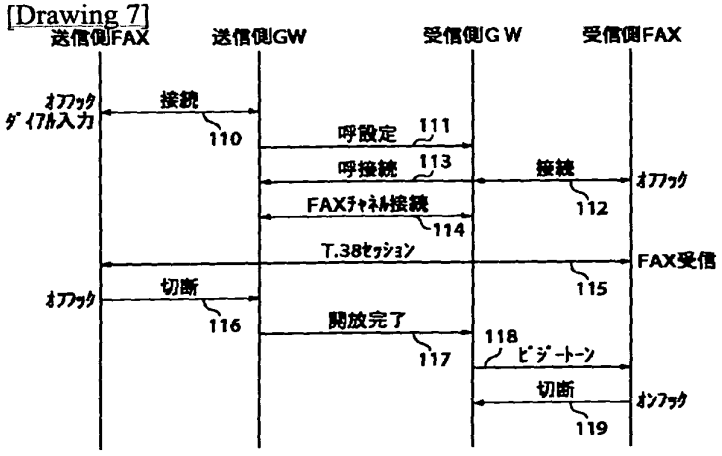
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]